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10/743,901	12/24/2003	Masatoshi Kimura	1341.1170	9193

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EXAMINER	
WASEL, MOHAMED A	

ART UNIT	PAPER NUMBER
2154	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/743,901	KIMURA ET AL.	
	Examiner	Art Unit	
	MOHAMED WASEL	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/24/03 & 4/6/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to application filed on December 24, 2003. Claims 1-9 are pending and presented for examination.

Title

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Abstract

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 4, 5 and 9 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 4-5 and 9, the claims are directed to computer programs which would have reasonably interpreted as software alone and thus lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material per se. Applicant is advised to direct the claim language to computer programs **stored** on a computer-readable

storage medium such as hard disk, CD-ROM or the like to overcome the 101 rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation **"when the idle capacity..."** in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 9, the limitation "**switching a switching unit, which is provided...**" in line 5 renders the claim indefinite because it is unclear what this limitation pertains to. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al, (hereinafter referred to as "Huang") US Patent No. 6,122,713.

1. As per claim 1, Huang teaches an information processing apparatus (**Fig. 2, element 160 'CPU'**) connected to a data memory (**Fig. 2, element 182**), comprising:

a storage unit (**Fig. 2, element 166, main memory**);

an access control unit (**Fig. 2, element 168)** that allocates access between the storage unit and the data memory (**col. 5, lines 37-50**); and

an information memory (**Fig. 3, element 204, 'shared memory'**) that stores information communicated between the access control unit and the data memory (**col. 6, lines 32-50; wherein the**

information memory stores information communicated between the access control unit and the data memory).

2. As per claim 3, Huang teaches an information processing system comprising:

a data memory (**Fig. 2, element 182**); and

an information processing (**Fig. 2, element 160, 'CPU'**) apparatus that is connected to the data memory (**Fig. 2, element 182**), the information processing apparatus including

a storage unit (**Fig. 2, element 166, 'main memory'**);

an access control unit (**Fig. 2, element 168**) that allocates access between the storage unit and the data memory (**col. 5, lines 37-50**); and

an information memory (**Fig. 3, element 204, 'shared memory')** that stores information communicated between the access control unit and the data memory (**col. 6, lines 32-50; wherein the information memory stores information communicated between the access control unit and the data memory**).

3. Claim 4 is rejected under the same rationales as claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al, (hereinafter referred to as "Huang") US Patent No. 6,122,713 in view of Toyoda Yasushi, Japanese Patent Pub. No. 2002366308 (hereinafter referred to as "Yasushi").

4. As per claims 2 and 5, Huang did not explicitly show wherein the access control unit allocates the access to the storage unit when the idle capacity of the storage unit is equal to or more than a threshold

value, and allocates the access to the data memory when the idle capacity of the storage unit is less than the threshold value.

However, Yasushi teaches the allocating includes checking an idle capacity of the storage unit, and allocating the access to the storage unit when the idle capacity is equal to or more than a threshold value, and allocating the access to the data memory when the idle capacity is less than the threshold value (**see abstract**), for the purpose of easily increasing storage area to enable a user to perform work without requiring labor of data movement neither worrying about the storage size.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of Yasushi in the invention of Huang, for the purpose of increasing storage area to enable a user to perform work without requiring labor of data movement.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang in view of Muehsam U.S. Patent No. 6,608,400.

5. As per claim 6, Huang teaches a gateway card (**Fig. 2, element 122, 'Device Interface Card'**) that is connected to an information processor (**Fig. 2, element 160, 'CPU'**) and that allows transfer of data between different networks (**col. 1, lines 30-32 and col. 5, lines 3-7**), comprising:

an information storage unit that stores information communicated between the access control unit and the information processor (**Fig. 2, element 166**)

Huang teaches the ability of switching the connection of the shared memory between the processor and the interface card (**see Huang, col. 7, lines 1-47**; the shared memory is used by either the processor or the interface card. The switching is done using priority or semaphores, but both components (processor and interface card) do not use the shared memory at the same time, they shared it by switching from the processor to the interface card or from the interface card to the processor);

Although one of ordinary skill in the art would understand that Huang switches between the information processor and the memory based on the operation status (or based on the priority) as shown on col. 7, lines 1-47. However, because the instant invention is more directed to power operation status,

the examiner introduced a secondary reference that explicitly teaches the switching between the information processor and the memory when the operation status of the information processor is a first operation status, and controls the switching unit to connect between the gateway card (interface card) and the memory when the operation status of the information processor is shifted from the first operation status to a second operation status (**see Muehsam, col. 3, lines 6-24**, wherein Muehsam teaches when the power of the first device fails, or power ceases as a result of power saving mode, the connection of the shared HDD is switched to other device sharing the HDD), for the purpose of utilize the system without stalling for processing thus significantly increase performances.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of Muehsam in the invention of Huang, for the purpose of avoiding stalling processing by switching to other device when one device fails. Furthermore, Muehsam covers the deficiency of Huang by teaching the detail of a method and reason for switching the connection of the common hard disk drive.

Furthermore, Muehsam teaches the system unit HDD used with station components and memory components. One of ordinary skill in the art at the time of the invention was made would understand that with a memory component, there must be an access control unit that controls an access to the memory (**see Muehsam, col. 3, lines 6-14**). This is also taught by Huang wherein the memory has an access control unit (**Huang col. 5, lines 16-56**). The access control units allocates the access to the memory via the switching unit when the operation status of the information processor is the second operation status (**see Muehsam, col. 3, lines 6-24**, wherein Muehsam teaches when the power of the first device fails), and allocates that the access to the memory via the information processor and the switching unit when the operation status of the information processor is the first operation status (**see Muehsam, col. 3, lines 6-24**, wherein the access is allocated through the station computer and the switch 'power check switch').

6. As per claim 7, Muehsam further teaches the gateway card wherein the first operation status is a status that the information processor is in a normal power mode, and the second operation status is a status that the information processor is in a power-saving mode (**see Muehsam, col. 3, lines 6-24**).

7. As per claim 8, Huang teaches a gateway device comprising an information processor (**Fig. 2, element 160, 'CPU'**) and a gateway card **(Fig. 2, element 122, 'Device Interface Card'**) that is connected to the information processor and that allows transfer of data between different networks (**col. 1, lines 30-32 and col. 5, lines 3-7**),

an information storage unit that stores information communicated between the access control unit and the information processor (**Fig. 2, element 166**)

Huang teaches the ability of switching the connection of the shared memory between the processor and the interface card (**see Huang, col. 7, lines 1-47**, the shared memory is used by either the processor or the interface card. The switching is done using priority or semaphores, but both components (processor and interface card) do not use the shared memory at the same time, they shared it by switching from the processor to the interface card or from the interface card to the processor);

Although one of ordinary skill in the art would understand that Huang switches between the information processor and the memory based on the operation status (or based on the priority) as shown on col. 7, lines 1-47. However, because the instant invention is more directed to power operation status, the examiner introduced a secondary reference that explicitly teaches the switching between the information processor and the memory when the operation status of the information processor is a first operation status, and controls the switching unit to connect between the gateway card (interface card) and the memory when the operation status of the information processor is shifted from the first operation status to a second operation status (**see Muehsam, col. 3, lines 6-24**, wherein Muehsam teaches when the power of the first device fails, or power ceases as a result of power saving mode, the connection of the shared HDD is switched to other device sharing the HDD), for the purpose of utilize the system without stalling for processing thus significantly increase performances.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of Muehsam in the invention of Huang, for the purpose of avoiding stalling processing by switching to other device when one device fails. Furthermore, Muehsam covers the deficiency of Huang by teaching the detail of a method and reason for switching the connection of the common hard disk drive.

Furthermore, Muehsam teaches the system unit HDD used with station components and memory components. One of ordinary skill in the art at the time of the invention was made would understand that with a memory component, there must be an access control unit that controls an access to the memory (**see Muehsam, col. 3, lines 6-14**). This is also taught by Huang wherein the memory has an access control unit (Huang col. 5, lines 16-56). The access control units allocates the access to the memory via the switching unit when the operation status of the information processor is the second operation status (**see Muehsam, col. 3, lines 6-24**, wherein Muehsam teaches when the power of the first device fails), and allocates that the access to the memory via the information processor and the switching unit when the operation status of the information processor is the first operation status (**see Muehsam, col. 3, lines 6-24**, wherein the access is allocated through the station computer and the switch 'power check switch').

Also, Muehsam shows the information processor shifts the operation status from the first operation status to the second operation status when a predetermined cause of a shift occurs (**col. 1, lines 30-32 and col. 5, lines 3-7, 'power failure occurs'**)

8. As per claim per claim 9, it is rejected for the same reasons set forth above in claim 6.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to form PTO-892 (Notice of Reference Cited) for a list of relevant prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Wasel whose telephone number is (571) 272-2669. The examiner can normally be reached on Mon-Fri (8:00 am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mohamed Wasel/
Patent Examiner, Art Unit 2154
September 6, 2008

/Nathan J. Flynn/

Supervisory Patent Examiner, Art Unit 2154